

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-8 (cancelled)

Claim 9. (currently amended) ~~A method according to claim 1, wherein the post-bleaching is carried out~~ In a method for the bleaching of chemical pulp, wherein the pulp is treated in a plurality of different steps and wherein at least in one step a bleaching solution which contains a peracid is used, the improvement in which the peracid is used in an post-bleaching which is the last step of the bleaching process, the post-bleaching taking place after the bleach plant steps in a pulp flow pipe, a storage tower and/or the paper machine in the presence of one or several earth-alkali metal compounds, wherein the pH of the post-bleaching solution is within the range of 3-8, and the kappa number of the pulp before the post-bleaching with a peracid is at maximum 4.

Claims 10-17 (cancelled)

Claim 18. (previously presented) A method for the bleaching of chemical pulp, comprising treating the pulp in a sequence of different steps at a bleaching plant, and finally in a post-bleaching step in a pulp flow pipe during transfer of the pulp, in a storage tower or at a paper mill outside the bleach plant, said post-bleaching being applied to a pulp having a kappa number at maximum 4 and comprising use of a bleaching solution containing peracid and having a pH within the range of 3-8, in the presence of one or several earth-alkali metal compounds, the peracid turning colorless chromophoric groups in the pulp.

Claim 19. (previously presented) A method for the bleaching of chemical pulp, comprising treating the pulp in a sequence of different steps at a bleach plant, transferring the treated pulp outside the bleaching plant and subjecting said treated pulp to a post-bleaching step outside the bleach plant in a pulp flow pipe during transfer of the pulp, in a storage tower or at a paper mill, said post-bleaching being applied to a pulp having a kappa number at maximum 4 and comprising use of a bleaching solution containing peracid and having a pH within the range of 3-8, in the presence of one or several earth-alkali metal compounds, the peracid turning colorless chromophoric groups in the pulp.